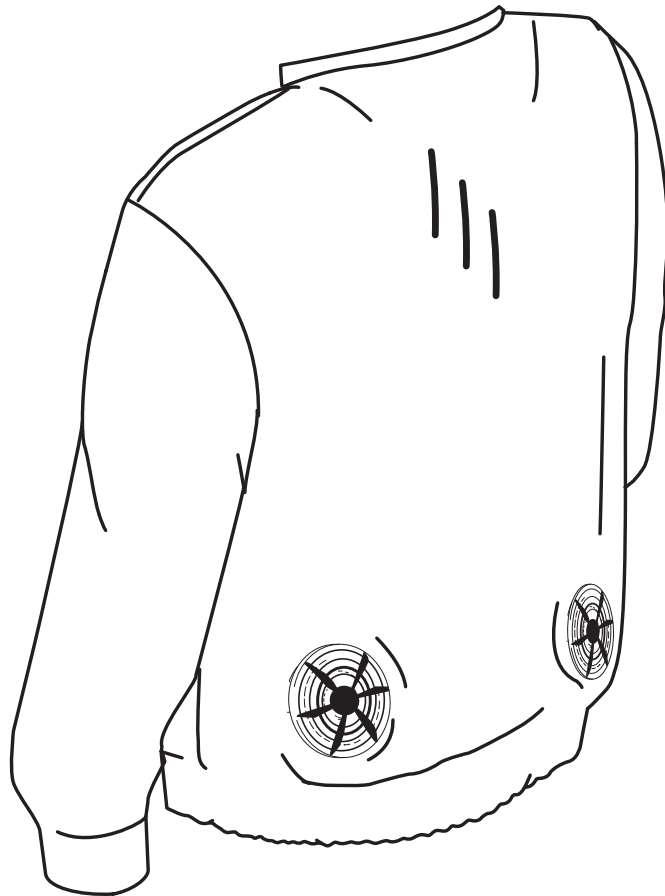




## 30V BATTERY-POWERED FAN-COOLED VEST

### Operations Manual



To reduce the risk of injury, the user must read and understand the Operator's Manual before using this product. Save these instructions for future reference.

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# Register Your Equipment

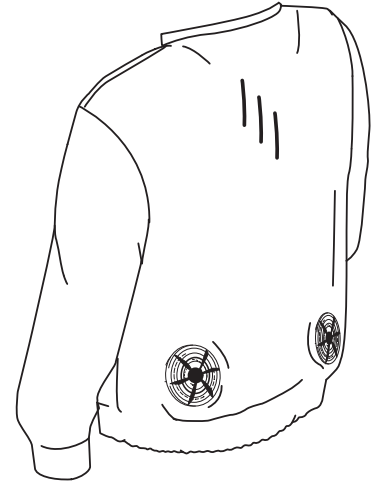
Thank you for purchasing TERN® equipment! Your product is covered by the TERN® Warranty policy, but in order to activate your warranty, we need you to register your product. In addition to activating your equipment warranty, product registration will grant you access to important product updates, streamlined customer service and more.

## INCLUDED WITH YOUR REGISTRATION

- ✓ Equipment Warranty Activation
- ✓ Product Updates
- ✓ Streamlined Customer Service
- ✓ Exclusive Discounts and Sales

## STEPS TO REGISTER YOUR EQUIPMENT

1. Visit [www.ternwear.com](http://www.ternwear.com)
2. Choose “Product Registration” at the bottom of the page
3. Enter your equipment’s serial number to get started
4. Provide all required information
5. Submit Registration



---

## Equipment Resources

TERN® Customer Service doesn’t stop at checkout. We understand the proper equipment, spare parts, instruction manuals, and more are needed at the drop of a hat. Visit [www.ternwear.com](http://www.ternwear.com) to gain access to the incredible resources below.

### How To Video Library

More of a visual person? Visit our Video Library for equipment assembly instructions, troubleshooting tips, and more!

**Found at the TERN® Resource Center**

### Manual and Assembly Guide Library

Visit our Manual Library if you are looking for a lost operations manual or a particular spare part?

**Found on the TERN® Manuals Page**

### Service Requests

In need of a quick fix ? Submit a Service Request and a TERN® Technician will respond shortly to get you the help you need.

**Choose “Service Request” at the bottom of [www.ternwear.com](http://www.ternwear.com)**



This manual provides information and procedures to safely operate and maintain this model. For your own safety and protection from injury, carefully read, understand and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact TERN® or visit [www.tern-wear.com](http://www.tern-wear.com) This machine is built with user safety in mind; however, it can present hazards if improperly operated and serviced. Follow operating instructions carefully. If you have questions about operating or servicing this equipment, please contact TERN®.

The information contained in this manual is based on machines in production at the time of publication. TERN® reserves the right to change any portion of this information without notice.

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Any type of reproduction or distribution not authorized by TERN® represents an infringement of valid copyrights and will be prosecuted. We expressly reserve the right to make technical modifications, even without due notice, which aim at improving our machines or their safety standards.

## 1. SAFETY INFORMATION

This manual contains DANGER, WARNING, CAUTION, and NOTE callouts which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



**DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



## 1.1 Fire Safety

If your machine catches fire, turn off the electric supply. Using a dry powder or CO<sub>2</sub> fire extinguisher, put out the fire. If the fire cannot be put out, keep away and call the fire department. If you are in any doubt about the safety condition of your machine, please consult TERN®.

## 2. OPERATING SAFETY



Familiarity and proper training are required for the safe operation of equipment! Equipment operated improperly or by untrained personnel can be dangerous! Read the operating instructions contained in both this manual and the engine manual and familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the machine.

### 2.1 General Notes

**2.1.1 DO NOT** allow children to operate this appliance or use it as a toy.

**2.1.2 DO NOT** use for any purpose other than those described in this User's Guide.

**2.1.3 DO NOT** insert metal objects into lithium batteries. It can cause heat, rupture, fire, liquid leakage, etc.

**2.1.4 DO NOT** use chargers without PSE certification.

**2.1.5** Turn off the power when the battery becomes unusually hot. It may cause a breakdown or an accident.

**2.1.6 DO NOT** modify, and never disassemble or repair. It may impair the performance or safety of the battery. It may cause fire, electric shock, or injury.

**2.1.7** Keep battery terminals away from metal objects to avoid trampling or strong impact.

**2.1.8 DO NOT** put it into fire or heat it, otherwise it will cause heat, burst, fire and liquid leakage.

**2.1.9 DO NOT** use, charge, store or place in places with strong direct sunlight, high temperature, high humidity, wading, inside the car under the hot sun, near the open flame and other places; Can cause discoloration, deformation, electric shock, failure, etc.

**2.1.10** The battery performance and service life will deteriorate. The plastic parts became deformed and became the cause of the failure.



**WARNING DO NOT** wear it in an environment where the temperature exceeds 50 °C, such as sauna. It can cause burns.



**WARNING DO NOT** During maintenance, be sure to unplug the power plug from the socket, and do not unplug it again with wet hands. You may get an electric shock or get hurt.



**WARNING DO NOT** Please stop charging or using in rain, high humidity, humid places and places with flammable liquids or gases.



**WARNING DO NOT** dip in water, seawater, etc., and don't splash water. May cause short circuit, electric shock, fire, rust or failure.

**2.1.11** Odor, fever, discoloration, deformation or other abnormalities are found during use, charging and storage. Stop using it immediately. It can cause injuries, fever, rupture and fire. Turn off and remove immediately. High chance of fire and rupture.

**2.1.12** Stop using the battery immediately when it leaks or smells bad, and stay away from open flames.

**2.1.13 DO NOT** use it for children, animals, etc. Accidents and injuries are the causes.

**2.1.14** Cut off the power when using. Will have a negative impact on the battery.

**2.1.15 DO NOT** turn on the power except when wearing it. It may cause battery power loss.

**2.1.16** When unplugging and plugging the battery again, grab a part of the connector or plug. Can lead to failure and damage.

**2.1.17** Wipe it clean if the spilled liquid gets on your skin or clothes. May get dermatitis, etc.

## **2.2 Battery Safety**

**2.2.1** As it may cause heat or fire, please follow local ordinances when disposing.

**2.2.2 DO NOT** use it when the battery life is extremely short.

**2.2.3 NEVER** store or charge battery in wet conditions.

**2.2.4 NEVER** make any adjustments to the tool if battery is connected.

**2.2.5 NEVER** interfere with the batteries integrity as this can cause injury and void warranty.

**2.2.6 NEVER** use or dispose battery in fire as this can cause it to explode. Check local codes for more information on proper battery disposal.

**2.2.7 NEVER** use equipment if it has been damaged or modified as this can cause injury.

**2.2.8** When not in use, ensure battery is stored in a dry place away from any flammable objects.

**2.2.9 ALLOW** battery to cool down after each use to avoid burn injuries.

**2.2.10** Only use the manufacturer's designated battery with this machine.

Use of any other battery can damage unit and will void warranty.

**2.2.11** Battery leakage may occur when operated in extreme temperature conditions.



**WARNING** If battery liquid contacts skin, wash immediately with water and soap, following with white distilled vinegar or lemon juice to neutralize. If the liquid comes in contact with eyes, flush out eyes with water for 10 minutes and seek medical attention immediately.

**2.2.12** Have all servicing done by an approved TERN® Technician or Service Center with original replacement parts.

### 2.3 Fan Safety

**2.3.1 NEVER** put your finger in the fan. Keep away from children, and keep out of their reach of their hands and fingers. There is risk of injury.

**2.3.2** When the temperature of the fan motor becomes high, please stop using it. If the fan is wet, the fan will fail.

**2.3.3 DO NOT** clean the fan with liquid, enter bodies of water, or remain in prolonged rainy conditions.

**2.3.4 DO NOT** use a hair dryer to clean the fan. Fan blades may be deformed or damaged.

**2.3.5 DO NOT** exert too much force on the fan and wiring harness. It will lead to disconnection and breakage.

**2.3.6 DO NOT** insert rods into the fan to stop the propeller. Be mindful of small projectiles such as stones, this may cause the motor to stall and burn out and cause propeller damage.

**2.3.7** Be sure to hold the connector or plug part when plugging and unplugging connectors and plugs.

**2.3.8 DO NOT** exert unreasonable force. It will lead to disconnection and breakage.

**2.3.9 DO NOT** use it in dusty places. It may be damaged after inhaling dust.

## 3. EQUIPMENT PERFORMANCE

### 3.1 Fan Vest Design

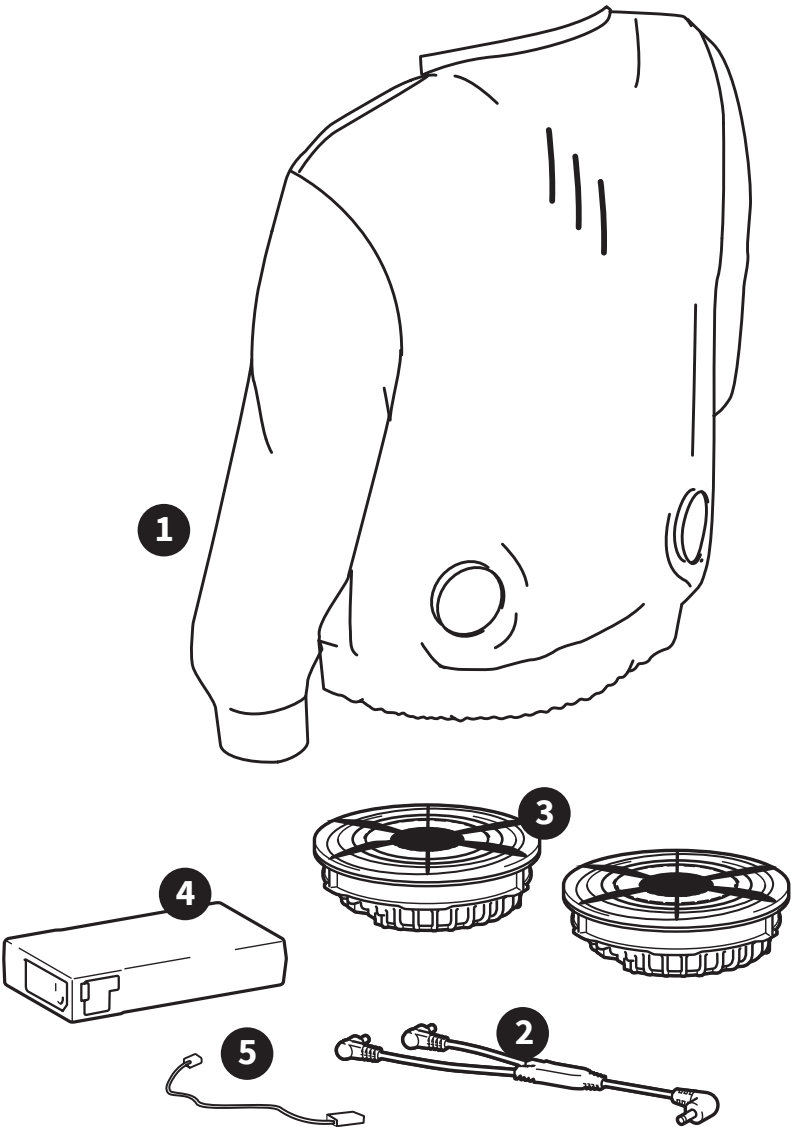
Beat the heat without sacrificing protection. Our Fan-Cooled Jackets/vests delivers all-day airflow and full-arm coverage—perfect for blazing jobsites, sun-soaked trails, or weekend adventures. Whether you're grinding on the jobsite, hiking under record heat, or running errands in sweltering weather, this jacket keeps you cool, dry, and focused. Pair it with any outfit for a sleek, technical look that works from workday to weekend.

### 3.2 Specifications

| FAN VEST          |                        |
|-------------------|------------------------|
| Power             | 30 VDC                 |
| Operation Voltage | 17-30 VDC              |
| Start Voltage     | 17VDC                  |
| Amperage          | 0.35A + 10%            |
| Input Wattage     | 10.5W + 10%            |
| Speed             | 8000RPM + 10%          |
| Air Flow          | 78.0+10% CFM (36.79L/) |
| Air Pressure      | 23.3 + 10% mmH2O       |
| Noise Level       | <60 dB(A)              |

### 3.3 Fan Vest Parts

- 1. Outerwear
- 2. Connector Cable
- 3. Fans (X2)
- 4. Battery Box
- 5. Charging Cable



## 4. BEFORE YOU BEGIN

**4.1** Confirm the battery casing is intact with no swelling, cracks, or leaks.

**4.2** Inspect the cables and plugs for frayed wires or damaged pins.

**4.3** Ensure the fan blades are clear of debris and that the lid are securely fastened.

**4.4** Charge battery to full power. **FIGURE 1.**

### 4.1 Battery Charging

**4.1.2** Use only PSE-certified chargers.

**4.1.3** Charge at room temperature. If the battery is hot from use, allow it to cool before plugging it into a charger.

**4.1.4** Unplug the charger once the cycle is complete; **DO NOT** leave the battery connected to power indefinitely.

**NOTE:** The battery indicator will show you the battery power level.

## 5. OPERATION

**NOTE:** After opening the box, carefully remove the fans, batteries, and accessories.

### 5.1 Fan Installation

**5.1.1** Turn the jacket inside out and locate fan cutouts. **FIGURE 2.**

**5.1.2** Hold the fan with both hands, placing one hand on the top and the other on the bottom of the unit.

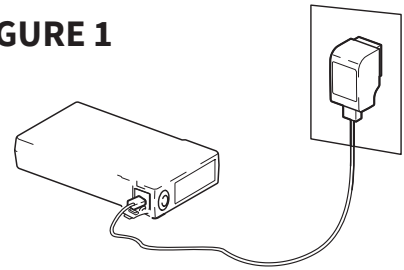
**5.1.3** Turn the top section of the fan counterclockwise until it separates from the base. **FIGURE 3.**

**5.1.4** Insert the fan into the jacket's fan cutout with the fan cover facing outward. **FIGURE 4.**

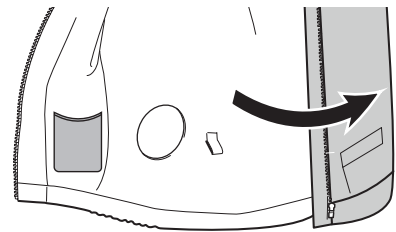
**5.1.5** From the inside of the jacket, attach the bottom section of the fan and rotate it clockwise until securely tightened. **FIGURE 5.**

**5.1.6** Once both fans are installed, connect the cables to each fan unit. **FIGURE 6.**

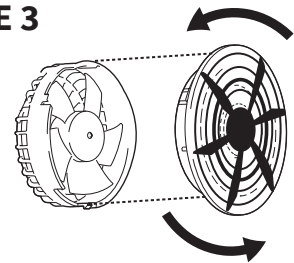
**FIGURE 1**



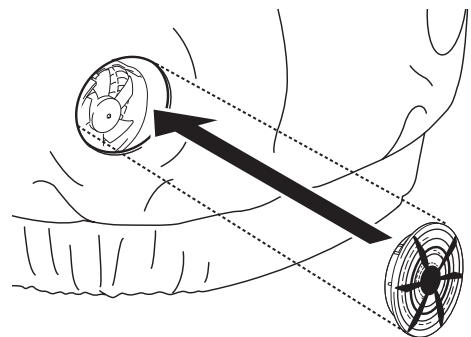
**FIGURE 2**



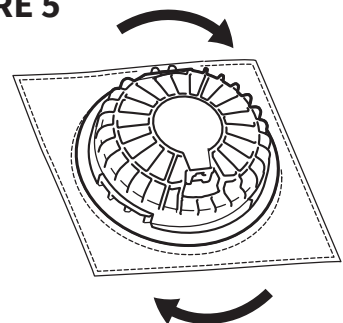
**FIGURE 3**



**FIGURE 4**



**FIGURE 5**





**DANGER ALWAYS** hold the plug head when inserting or removing cables. Never pull on the wire itself, as this leads to internal damage.

## 5.2 Connecting the Battery

**5.2.1** Plug the main lead cable into the battery pack. **FIGURE 7.**

**5.2.3** Ensure the connection is firm and seated fully. **FIGURE 7.**

**5.2.4** Secure cables in place with chords.

**5.2.5** Then place the battery pack within the inside pocket. **FIGURE 8.**

## 5.3 Powering & Adjusting the System

**NOTE: DO NOT** turn the power on until you have fully put on the garment. This prevents unnecessary battery drain and ensures the air flows correctly around the body.

## 5.4 Turning Power ON

**5.4.1** To start , press the battery button for 3 seconds.

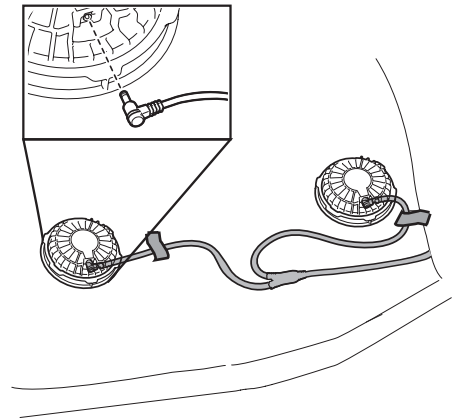
**5.4.2** Once active, verify that both fans are spinning.

## 5.5 Adjusting Airflow

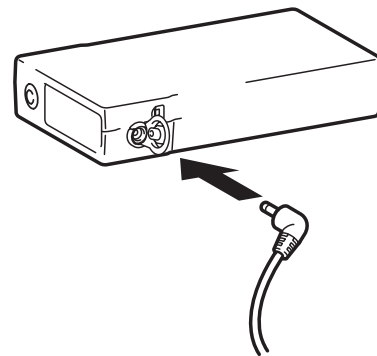
**5.5.1** After turning on the system, cycle through the speed settings to reach your desired comfort level, by pressing the power button.

**NOTE:** Select the appropriate speed based on your environment for continuous use.

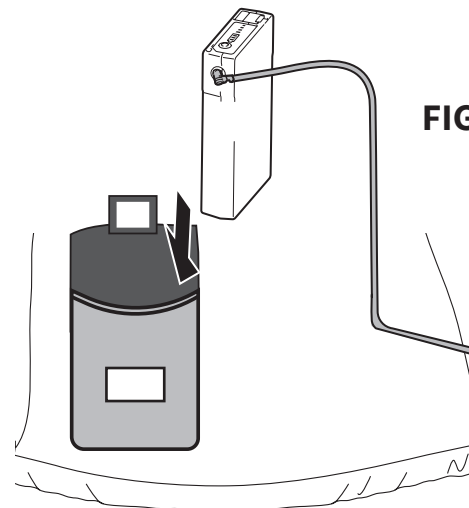
**FIGURE 6**



**FIGURE 7**



**FIGURE 8**



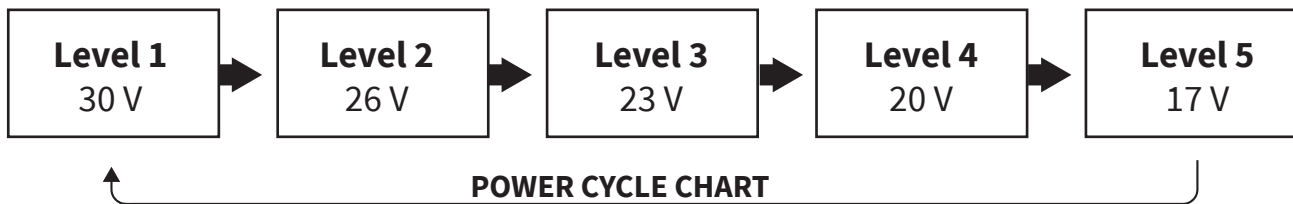
Power Output  
(30/26/26/20/17v)

30v

Battery Life

100%

| POWER CYCLE CHART |         |                |       |
|-------------------|---------|----------------|-------|
| Levels            | Voltage | Battery Life   | CFM   |
| 1                 | 30      | Approx. 4 hrs  | 78.01 |
| 2                 | 26      | Approx. 5 hrs  | 70.71 |
| 3                 | 23      | Approx. 6 hrs  | 65.48 |
| 4                 | 20      | Approx. 9 hrs  | 59.05 |
| 5                 | 17      | Approx. 11 hrs | 51.72 |



## 5.6 Turning Off

**5.6.1** After removing the garment, long press the battery to cut off the power to preserve battery health and prevent overheating.

## 5.7 Usage Environment Limits

**5.7.1** To maintain the integrity of the electronics, observe these environmental constraints.

**5.7.1 DO NOT** operate the system in environments exceeding 50°C (122°F).

**5.7.2** Stop using the device immediately in the event of rain or high humidity. Do not operate with wet hands.

**5.7.3** Ensure your outer clothing or equipment (like a backpack or additional coat) does not block the fan intakes. Restricted airflow can cause the motor to stall or burn out.

## 6. MAINTENANCE

### 6.1 Cleaning the Fans

**6.1.1** Never submerge the fans in water.

**6.1.2** Do not use a hair dryer to clean or dry the fan units; heat can deform the blades.

**6.1.3** Keep the fan entrance clear of dust; if used in dusty areas, clean the grills regularly to prevent motor damage.

**6.2 Garment Washing Care**

- 6.2.1** Remove the fan unit(s), battery, and battery holder from the jacket or vest before washing.
- 6.2.2** Follow all care instructions provided on the garment label.
- 6.2.3** Cotton materials may shrink slightly after washing.
- 6.2.4** Do not wash the jacket or vest with other garments, as this may cause color fading or color transfer.
- 6.2.5** Use a laundry bag or laundry net when machine washing.
- 6.2.6** Do not use fabric softener.
- 6.2.7** Use only a mild, neutral detergent.
- 6.2.8** Remove the jacket or vest from the washing machine immediately after the wash cycle is complete.
- 6.2.9** Ensure all zippers are fully closed before washing.

|                                                                                                                                                                                                                                                             |                                                                      |                                                                                     |                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------|
|                                                                                                                                                                            | Read the instruction manual.                                         |    | Do not wring.                                      |
|                                                                                                                                                                          | Machine wash at below 30°C on the gentle cycle.                      |   | Iron at low temperatures (not exceeding 110°C).    |
|                                                                                       | Machine wash at below 40°C on the gentle cycle.                      |  | Iron at medium temperatures (not exceeding 150°C). |
|                                                                                                                                                                          | Machine wash in domestic or commercial machines on the gentle cycle. |  | Do not iron.                                       |
|                                                                                       | Do not bleach.                                                       |  | Do not dry clean.                                  |
|    | Line dry in the shade.                                               |  | Do not tumble dry.                                 |

**6.3 Maintenance Record**

TERN® vest are assembled with care and will provide years of service when properly maintained. Preventative maintenance and routine service are essential to the long life of your equipment. Adhere to reading through this manual thoroughly. You will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service, be sure to contact a TERN® Technician. For your convenience we have provided this space to record relevant data about your TERN® equipment.



|                 |  |                  |  |
|-----------------|--|------------------|--|
| Invoice Number: |  | Type of Machine: |  |
| Date Purchased: |  | Dealer Name:     |  |
| Serial Number:  |  | Dealer Phone:    |  |

| REPLACEMENT PARTS USED |             |     |      |      | MAINTENANCE LOG |           |
|------------------------|-------------|-----|------|------|-----------------|-----------|
| PART NO.               | DESCRIPTION | QTY | COST | DATE | DATE            | OPERATION |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
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|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |
|                        |             |     |      |      |                 |           |

## 7. REPLACEMENT PARTS

**7.1** For replacement parts and technical questions visit [www.tern-wear.com](http://www.tern-wear.com)

**7.2** Not all equipment components are available for replacement. The illustrations within this manual are a convenient reference to the location and position of parts in the assembly sequence.

**7.3** When ordering parts, the following will be required: equipment model number, serial number/lot, date code, and description.

## 8. TROUBLESHOOTING

| Category        | Observed Issue               | Potential Cause            | Recommended Action / Solution                                                       |
|-----------------|------------------------------|----------------------------|-------------------------------------------------------------------------------------|
| Power & Battery | System fails to power on     | Battery is depleted        | Charge battery fully using a certified PSE charger.                                 |
| Power & Battery | Power cuts out during use    | Overheating protection     | Shut off power immediately. Allow battery to cool in a shaded area.                 |
| Power & Battery | Poor electrical contact      | Dirty terminals            | Clean metal terminals on battery and connector with a dry cloth.                    |
| Power & Battery | System unresponsive          | Loose connection           | Ensure cable is fully seated in battery port; grip plug head to insert.             |
| Power & Battery | Short battery life           | Battery health decline     | Replace battery if runtime is significantly shorter despite full charge.            |
| Power & Battery | Unusual odor or deformation  | Internal component failure | STOP USE IMMEDIATELY. Keep battery away from flammable materials.                   |
| Fan & Airflow   | Weak or inconsistent airflow | Intake obstruction         | Check if outer clothing, coats, or bags are blocking exterior fan grills.           |
| Fan & Airflow   | Weak airflow                 | Dust or debris buildup     | Inspect fan for dust/hair. Wipe clean with a dry cloth.                             |
| Fan & Airflow   | Grinding or rattling noise   | Foreign object in housing  | Do not submerge.<br>Check for stones/debris. Do not insert rods into moving blades. |
| Fan & Airflow   | Fan stalls / refuses to spin | Motor burnout or blockage  | Turn off instantly if stalled to prevent motor burnout.                             |
| Fan & Airflow   | Wet components               | Moisture / Rain            | Stop use and air dry naturally. DO NOT use a hair dryer (warps blades).             |
| General Safety  | Laundry Preparation          | Electronics still attached | Remove battery, both fan units, and all wiring before washing garment.              |
| General Safety  | Chemical Leakage             | Battery fluid contact      | Wash skin/clothes immediately with water to prevent dermatitis.                     |

## 9. EQUIPMENT WARRANTY

Your new TERN® equipment is warranted to the original purchaser for a period of two-year (24 months) from the original date of purchase. The TERN® warranty is against defects in design, materials and workmanship. Any modifications made will void the manufacturer warranty. ***Any Modification made to the unit will void manufacturer warranty.***

The following are not covered under the warranty:

**9.1.1** Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.

**9.1.2** Alterations, additions or repairs carried out by persons other than TERN® or their recognized agents.

**9.1.3** Transportation or shipment costs to and from TERN® or their recognized agents, for repair or assessment against a warranty claim, on any machine.

**9.1.4** Materials and/or labor costs to renew, repair or replace components due to fair wear and tear.

**9.1.5** TERN® and/or their recognized agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

### 9.2 Warranty Claims

Before submitting any warranty claim, you will need to register your new TERN® equipment through [www.ternwear.com](http://www.ternwear.com).

Follow the steps on page 3 or scan this QR codes to complete the equipment registration. After registration is complete, all warranty claims should firstly be directed to TERN® through the online Service Request form found at [www.ternwear.com/pages/contact](http://www.ternwear.com/pages/contact).



**For Service Call (866) 577- 4476**



## Cool Never Quits.

We're a hybrid workwear + lifestyle brand born where real work happens and real life is lived. Our gear blends industrial durability with everyday comfort so you don't have to change who you are—or what you're doing—to feel ready. From jobsite to weekend, we design apparel that moves with you and stands up to anything. Visit [www.tern-wear.com](http://www.tern-wear.com) to get started today!



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